

CLAIMS

1. A method of determining whether an individual is or has been infected with *Neisseria gonorrhoeae*, said method including the step of detecting an isolated porA nucleic acid of *Neisseria gonorrhoeae*, if present in a biological sample obtained from said individual, a presence of said porA nucleic acid indicating that said individual is or has been infected with *Neisseria gonorrhoeae*.
2. The method of Claim 1, wherein said method includes the step of distinguishing said isolated porA nucleic acid of *Neisseria gonorrhoeae*, from a porA nucleic of another *Neisseria* species present in said biological sample.
3. The method of Claim 2, wherein said another *Neisseria* species is *N. meningitidis*.
4. The method of Claim 1, including the step of subjecting the biological sample to nucleic acid sequence amplification under conditions which facilitate amplification of said isolated porA nucleic acid of *Neisseria gonorrhoeae*, to produce an amplification product.
5. The method of Claim 4, wherein the amplification product corresponds to a fragment of a *Neisseria gonorrhoeae*, porA pseudogene.
6. The method of Claim 4, wherein nucleic acid sequence amplification is performed using one or more PCR primers having a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.
7. The method of Claim 4, including the step of detecting said amplification product by probe hybridization.
8. The method of Claim 7, wherein the probe is an oligonucleotide having a nucleotide sequence selected from the group consisting of SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:8; SEQ ID NO:9.
9. The method of Claim 8, wherein the probe is an oligonucleotide having a nucleotide sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.

10. The method of Claim 7, wherein detection of said amplification product is performed using fluorescence resonance energy transfer (FRET).

11. A method of determining whether a human individual is or has been infected with *Neisseria gonorrhoeae*, , said method including the steps of:

(i) subjecting a biological sample obtained from said human individual to nucleic acid sequence amplification using primers having respective nucleotide sequences according to SEQ ID NO:1 and SEQ ID NO:2, to produce a *porA* *Neisseria gonorrhoeae*, amplification product from a *Neisseria gonorrhoeae*, *porA* nucleic acid if present in said biological sample; and

(ii) detecting said amplification product, if present, by probe hybridization and fluorescence resonance energy transfer (FRET) using oligonucleotides having respective nucleotide sequences according to SEQ ID NO:3 having a donor fluorophore and SEQ ID NO:4 having an acceptor fluorophore, whereby a presence of said *porA* amplification product indicates that said individual is or has been infected with *Neisseria gonorrhoeae*, .

12. An oligonucleotide which is capable of hybridizing to a *porA* nucleic acid of *Neisseria gonorrhoeae*, sufficiently to enable detection of said *porA* nucleic acid, but which is not capable of hybridizing to a *porA* nucleic acid of another *Neisseria* species sufficiently to enable detection of said *porA* nucleic acid of said another *Neisseria* species.

13. The oligonucleotide of Claim 12, wherein said another *Neisseria* species is *N. meningitidis*.

14. The oligonucleotide of Claim 13 having a nucleotide sequence selected from the group consisting of SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:8; SEQ ID NO:9.

15. The oligonucleotide of Claim 14 having a nucleotide sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.

16. A kit for detecting a *porA* nucleic acid of *Neisseria gonorrhoeae*, , said kit comprising one or more oligonucleotides according to Claim 12 together with a DNA polymerase and/or one or more detection reagents.

17. The kit of Claim 16, wherein the one or more oligonucleotides have a nucleotide sequence selected from the group consisting of SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:8; SEQ ID NO:9.
18. The kit of Claim 17, wherein the one or more oligonucleotides have a nucleotide sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.
19. The kit of Claim 16, further comprising one or more primers that facilitate amplification of an *Neisseria gonorrhoeae*, *porA* nucleic acid.
20. The kit of Claim 19, wherein the one or more primers have a nucleotide sequence selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2.
21. A nucleic acid array comprising one or more oligonucleotides according to Claim 12, immobilized, coupled, bound, impregnated or otherwise in communication with a substrate.
22. The nucleic acid array of Claim 21, wherein the one or more oligonucleotides have a nucleotide sequence selected from the group consisting of SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:8; SEQ ID NO:9.
23. The nucleic acid array of Claim 22, wherein the one or more oligonucleotides have a nucleotide sequence selected from the group consisting of SEQ ID NO:3 and SEQ ID NO:4.